

IN THE CLAIMS:

Below is a complete listing of the claims as presented by Examiner's Amendment attached to a Notice of Allowability issued April 18, 2008. Please add new claims 77-79 as follows:

Claims 1-41. (Canceled).

Claim 42. (Previously presented) A parallel data processing system for search, storage and retrieval of data of a database responsive to client queries for specific data of said database, said parallel data processing system comprising:

a plurality of host processors including a root host processor, said root host processor being responsive to said client queries for said specific data of said database, wherein at least two host processors have a search engine and maintain information of a search queue of said client queries;

at least two host processors having a queue of search requests for specific data of said database, each of said host processors executing a search engine, communicating capacity and load information between host processors and said at least two host processors exchanging at least one search request, the search engine removing at least one search request from a search queue and generating an additional search request,

each of said host and root host processors maintaining a list of available host processors and information about the capacity and load for each available host processor in memory and broadcasting its capacity and load information to other host processors and bringing its search queue into balance with another host processor according to a time constant in response to receipt of said broadcast capacity and load information; and

a communications system coupling said host and root processors, wherein at least two host processors communicate capacity and load information to other host processors; selected host processors storing a database index for said database comprising nodes of a database tree for said database and data accessible via said nodes of said database tree.

Claim 43. (Canceled)

Claim 44. (Previously presented) A parallel data processing system for search, storage and retrieval of data of a database responsive to client queries for specific data of said database, said parallel data processing system comprising:

- a plurality of host processors including a root host processor, said root host processor being responsive to said client queries for said specific data of said database;

- each of said host and root host processors maintaining a list of available host processors and information about the capacity and load for each available host processor in memory;

- at least two host processors having a queue of search requests for specific data of said database, each of said host processors executing a search engine, communicating capacity and load information between host processors and said at least two host processors exchanging at least one search request, the search engine removing at least one search request from a search queue and generating an additional search request, and

- a communications system coupling said host and root processors, wherein at least two host processors communicate capacity and load information to other host processors and each have a search engine and each maintain load information of a search queue length of said client queries; each of said at least two host processors broadcasting its capacity and search queue length load information to other host processors and bringing its search queue of said client queries into balance according to a time constant with another host processor in response to receipt of said broadcast capacity and load information; selected host processors storing a database index for said database comprising nodes of a database tree for said database and data accessible via nodes of said database tree wherein the plurality of host processors comprise three host processors, of which two host processors have search engines and maintain information of said search queue of said client queries and the third comprises said root host processor.

Claim 45. (Previously presented) A parallel data processing system for search, storage and retrieval of data of a database responsive to client queries for specific data of said database, said parallel data processing system comprising:

- a plurality of host processors including a root host processor, said root host processor being responsive to said client queries for said specific data of said database;

- each of said host and root host processors maintaining a list of available host processors and information about the capacity and load for each available host processor in memory;

- at least two host processors having a queue of search requests for specific data of said database, each of said host processors executing a search engine, communicating capacity and load information between host processors and said at least two host processors exchanging at least one search request, the search engine removing at least one search request from a search queue and generating an additional search request, and

- a communications system coupling said host and root processors, wherein at least two host processors communicate capacity and load information to other host processors and have a search engine and maintain load information of a search queue length of said search queries; each of said at least two host processors bringing its search queue of client queries into balance with another host processor according to a time constant in response to receipt of said broadcast capacity and load information; selected host processors storing a database index for said database comprising nodes of a database tree for said database and data accessible via said nodes of said database tree wherein the plurality of host processors comprises two host processors, of which one comprises said root host processor and both said host processors have search engines and maintain information of said search queue of said client queries.

Claims 46-48. (Canceled)

Claim 49. (Previously presented) The parallel data processing system of claim 42, each host processor reconfiguring information on available host processors in response to the receipt of broadcast search queue length load and gathered processor capacity information.

Claim 50. (Previously presented) The parallel data processing system of claim 49, wherein the information on available host processors at each available host processor changes in response to failure of a host processor.

Claim 51. (Previously presented) The parallel data processing system of claim 49, wherein the information on available host processors at each available host processor changes in response to the addition of a host processor.

Claim 52. (Previously presented) The parallel data processing system of claim 42, wherein said plurality of host processors comprises groups of host processors.

Claim 53. (Previously presented) The parallel data processing system of claim 52, all host processors in each group operating on the same database.

Claim 54. (Previously presented) The parallel data processing system of claim 52, each group being assigned a portion of the database.

Claim 55. (Previously presented) The parallel data processing system of claim 54, each group being assigned a different portion of the database.

Claim 56. (Previously presented) The parallel data processing system of claim 55, wherein each processor of a group of processors is assigned the same portion of the database.

Claims 59-60. (Canceled)

Claim 61. (Previously presented) The parallel data processing system of claim 42, said database index being a database tree for said database, said host processors capable of executing a set of tests, associating one test to each non-terminal node of said database index for said database.

Claim 62. (Previously presented) The parallel data processing system of claim 42, said available host processors comprising groups of m processors where m is an integer greater than 1.

Claim 63. (Previously presented) The parallel data processing system of claim 42, wherein said communications system is proximately located to said root host processor.

Claim 64. (Previously presented) The parallel data processing system of claim 42, wherein the plurality of host processors comprises at least two host processors having search engines and maintaining information of a search queue of said client queries, one of said host processors processing a search request and generating a new search request.

Claims 65-74. (Canceled)

Claim 75. (Previously presented) The parallel data processing system of claim 42, further comprising shared memory between host processors.

Claim 76. (Previously presented) The parallel data processing system of claim 42, further comprising distributed memory among each processor.

Claim 77. (New) The parallel data processing architecture of claim 44 wherein said plurality of host processors comprise groups of host processors, each group having at least one assigned host processor, and each group being assigned a portion of the database.

Claim 78. (New) The parallel data processing architecture of claim 45 wherein said plurality of host processors comprise groups of host processors, each group having at least one assigned host processor, and each group being assigned a portion of the database.

Claim 79. (New) The parallel data processing architecture of claim 45 wherein the information on available host processors at each available host processor changes in response to one of failure and addition of a host processor.